# HYPERNUMBERS AND OTHER EXOTIC STUFF



## (1) MORE ON THE "ARITHMETICAL" SIDE

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## (8) TRIANGLE ZONE

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Extended PythagorasTheorem using Triangles, and its Applications to Engineering - Luis Teia

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The Eutrigon Theorem - a new\* twin to the theorem of Pythagoras

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 $\underline{https://math.stackexchange.com/questions/1861635/tetrahedral-coordinates-in-space-generalization-of-hexagonal-coordinates-generalization-of-hexagonal-coordinates-generalization-of-hexagonal-coordinates-generalization-of-hexagonal$ 

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### (9) SOFTWARE ZONE

**DATA STRUCTURES\*** 

Treesheet (tree-like spreadsheet) - <a href="http://strlen.com/treesheets/">http://strlen.com/treesheets/</a>

Blockchain (demo) - https://andersbrownworth.com/blockchain/

Heimer (mind map) - https://github.com/juzzlin/Heimer

DAS-UI <a href="https://das-ui.firebaseapp.com/">https://das-ui.firebaseapp.com/</a> <a href="https://szymonkaliski.com/writing/2017-09-08-building-das-ui/">https://szymonkaliski.com/writing/2017-09-08-building-das-ui/</a>

Orca (procedural sequencers) - <a href="https://github.com/Hundredrabbits/Orca">https://github.com/Hundredrabbits/Orca</a>

Taichi (spatially sparse multi-level data structures) - https://github.com/taichi-dev/taichi

Rasdaman (datacube and arrays) - http://www.rasdaman.org/wiki

Categorical Data (data-related tasks using category theory) - https://www.categoricaldata.net/

Enso (diagrammatic coding) - https://enso.org/language

Egison (efficient non-linear pattern matching with backtracking for non-free data type) - https://www.egison.org/

Eve (uniform data-processing) - http://witheve.com/

Habit (type-level programming) - https://www.habit-lang.org/

Fluidinfo (columnar shareable data) - https://github.com/fluidinfo && https://en.wikipedia.org/wiki/Fluidinfo

MentDB (world wide Data) - https://www.mentdb.org/mentdb weak.html

Obsidian (knowledge base on top of your local folder of plain text files) - https://obsidian.md/

LMQL (query language for large language models) - <a href="https://github.com/eth-sri/lmql">https://github.com/eth-sri/lmql</a>

Koka (effect typing, effect handlers, Perceus memory management) - https://koka-lang.github.io/koka/doc/book.html#why

NewLang (computing tensors and rational numbers) - https://github.com/rsashka/newlang

Odin (data-oriented programming)- <a href="https://odin-lang.org/">https://odin-lang.org/</a>

Cairo (provable programs and nondeterministic jumps) - <a href="https://www.cairo-lang.org/docs/how\_cairo\_works/cairo\_intro.html">https://www.cairo-lang.org/docs/how\_cairo\_works/cairo\_intro.html</a>

Exo (exocompilation) - https://exo-lang.dev/

Primecoin - https://en.wikipedia.org/wiki/Primecoin && https://primecoin.io/

#### STRUCTS\* WITH META

Bedrock (meta-distro) https://bedrocklinux.org/

Funtoo (meta-distro) - https://www.funtoo.org/Welcome

T2 System Development Environment (meta-distro) - https://t2sde.org/index.cgi/

DL Linux (meta-meta-distro) - https://web.archive.org/web/20181221164035/https://www.sudosatirical.com/articles/dl-linux-0-0-1-released/

Black (reflective) - http://pllab.is.ocha.ac.jp/~asai/Black/

Terra (meta-programming) - <a href="http://terralang.org/">http://terralang.org/</a>

MetaL (meta-language) - https://www.meta-language.net/faq.html#what

Rinci (metadata specifications) - https://metacpan.org/pod/Rinci#ABSTRACT

Circle (meta-programming) - <a href="https://www.circle-lang.org/">https://www.circle-lang.org/</a>

Hackett (meta-programming) - https://lexi-lambda.github.io/hackett/

Elena (polymorphic code) - https://github.com/ELENA-LANG/elena-lang/wiki/ELENA-Programming-Manual#overview

Beluga (mechanizing meta-theory) - https://www.cs.mcgill.ca/~complogic/beluga/index.html

Hazel (incomplete programs) - <a href="https://hazel.org/">https://hazel.org/</a>

Autohotkey (gui and scripting automation for windows) - https://www.autohotkey.com/

Rosie Pattern (beyond regex) - <a href="https://rosie-lang.org/about/">https://rosie-lang.org/about/</a>

Antipurity (self-aware interpreter) - https://github.com/Antipurity/conceptual

Multicompiler (defensive compiler) - https://immunant.com/blog/2018/09/multicompiler/

Avail (articulate programming) - https://www.availlang.org/about-avail/introduction/index.html

Push (evolutionary computing) - <a href="https://faculty.hampshire.edu/lspector/push.html">https://faculty.hampshire.edu/lspector/push.html</a>

Wyvern (built-in skill for large-scale design) - https://wyvernlang.github.io/

Gen (probabilistic) - <a href="https://probcomp.github.io/Gen/">https://probcomp.github.io/Gen/</a>

Pyro (probabilistic) - <a href="https://pyro.ai/">https://pyro.ai/</a>

Rascal (meta-programming) - <a href="https://www.rascal-mpl.org/">https://www.rascal-mpl.org/</a>

Pharo (software as objects, inmersive) - <a href="https://pharo.org/features">https://pharo.org/features</a>

DarklangGPT (Deployless cloud backends with AI-generated code) - https://darklang.com/

LangChain (simplify APP construction with LLMs) - https://langchain.com/

Scallop (neurosymbolic programming) - <a href="https://scallop-lang.github.io/">https://scallop-lang.github.io/</a>

Mojo (AI oriented) - <a href="https://docs.modular.com/mojo/why-mojo.html">https://docs.modular.com/mojo/why-mojo.html</a>

#### SOUND\*

Gwion - https://gwion.github.io/Gwion/

Kronos vesaronilo - <a href="http://kronos.vesanorilo.com/">http://kronos.vesanorilo.com/</a>

Supercollider - https://supercollider.github.io/

Faust - <a href="https://faust.grame.fr/">https://faust.grame.fr/</a>

Chuck - <a href="http://chuck.cs.princeton.edu/">http://chuck.cs.princeton.edu/</a>

#### NETWORKING\*

Live Raizo (network simulation) - <a href="https://sourceforge.net/projects/live-raizo/">https://sourceforge.net/projects/live-raizo/</a>

P4 (implement specific network behaviours) - <a href="https://p4.org/">https://p4.org/</a>

Helena (browsing automation) - <a href="https://helena-lang.org/">https://helena-lang.org/</a>

Volunia (rpg-like browser) <a href="http://www.volunia.com/">http://www.volunia.com/</a>

Gather (rpg-like meetings) - <a href="https://www.gather.town/">https://www.gather.town/</a>

Lynx (textual browser) - <a href="https://en.wikipedia.org/wiki/Lynx">https://en.wikipedia.org/wiki/Lynx</a> (web browser)

Beaker Browser (peer-to-peer Web browser) - <a href="https://beakerbrowser.com/">https://beakerbrowser.com/</a>

Nyxt browser (keyboard-driven browser) - <a href="https://github.com/atlas-engineer/next">https://github.com/atlas-engineer/next</a>

Jolie (microservices) - https://www.jolie-lang.org/

Daphile (headless music server) - https://www.daphile.com/

Skywave linux (software defined radio servers) - <a href="https://skywavelinux.com/">https://skywavelinux.com/</a>

Gotenna (off-grid mobile mesh) - <a href="https://gotenna.com/">https://gotenna.com/</a>

Manyverse (off-grid social networking) - https://www.manyver.se/faq/what-is-manyverse

p2p networking - https://www.gnunet.org/en/ https://zeronet.io/ https://freenetproject.org/

Eternal-september private news server (usenet) - <a href="http://eternal-september.org/">http://eternal-september.org/</a>

Aioe.org public news server (usenet) - https://news.aioe.org/

What is the Usenet improvement Project? - <a href="http://twovoyagers.com/improve-usenet.org/">http://twovoyagers.com/improve-usenet.org/</a>

Fediverse (federated servers for web-publishing) - https://en.wikipedia.org/wiki/Fediverse

Assemblyscript (a TypeScript-like language for WebAssembly) - https://www.assemblyscript.org/

Buzz (swarms robotics) - https://github.com/buzz-lang/Buzz && https://the.swarming.buzz/wiki/doku.php

Wing (entire cloud as the computer) - <a href="https://github.com/winglang/wing">https://github.com/winglang/wing</a>

#### OPERATING SYSTEM\*

XOD.IO (microcontrollers) - https://xod.io/

Elemental Processor SIMulator - <a href="https://wepsim.github.io/">https://wepsim.github.io/</a>

Mikrocodesimulator MikroSim 2010 (microcode) - http://www.mikrocodesimulator.de/index\_eng.php

Katai Struct (binary data structures) - https://kaitai.io/

Snowdrop OS (16-Bit Operating System) - http://sebastianmihai.com/snowdrop/

Turbo Rascal (design of 8-bit/16-bit games)- https://lemonspawn.com/turbo-rascal-syntax-error-expected-but-begin/

NESFab (creating NES games) - https://pubby.games/nesfab.html

Tunguska (a ternary computer emulator) - Viktor Lofgren - <a href="http://tunguska.sourceforge.net/">http://tunguska.sourceforge.net/</a>

The Trillium Architecture - Douglas W. Jones - http://homepage.divms.uiowa.edu/~jones/ternary/trillium.shtml

Red (full-stack) - https://www.red-lang.org/p/about.html

Racket - https://racket-lang.org/ && Neverlang - https://cazzola.di.unimi.it/neverlang2.html (language creation)

Rescatux - https://www.supergrubdisk.org/rescatux/ && Parted Magic - https://partedmagic.com/ (OSes for rescue and recovery)

Minix - https://www.minix3.org/ && 'An Open Letter to Intel' - https://www.cs.vu.nl/~ast/intel/

Los Procesadores Intel tienen un Secreto Misterio - <a href="https://www.youtube.com/watch?v=CaLb7waR6eo">https://www.youtube.com/watch?v=CaLb7waR6eo</a>

Debian-hurd (debian over Hurd) - https://www.debian.org/ports/hurd/ https://en.wikipedia.org/wiki/GNU Hurd

Trisquel (ubuntu over Libre-Linux) - <a href="https://trisquel.info/">https://trisquel.info/</a>

Noulith (attempt to give myself a new Pareto-optimal choice for quick-and-dirty scripts) - https://github.com/betaveros/noulith

Ratpoison (Window Manager) - https://www.nongnu.org/ratpoison/

IceWM (Window Manager) - https://ice-wm.org/

RedoxOS - https://doc.redox-os.org/book/ch01-06-how-redox-compares.html

Linux From Scratch! - https://www.linuxfromscratch.org/

#### LANGUAGE\*

Sono (linguistic study) - https://github.com/Nallantli/Sono

Quorum (evidence-oriented) - https://quorumlanguage.com/reference.html

Inform7 (interactive narrative, textual adventures) - <a href="http://inform7.com/">http://inform7.com/</a>

Poliqarp (universal concordancer for large corpora) - http://poliqarp.sourceforge.net/about.html

Paper generator - <a href="https://en.wikipedia.org/wiki/Paper generator">https://en.wikipedia.org/wiki/Paper generator</a>

Markup Languages list - https://web.mit.edu/mecheng/pml/standards.htm

Hedy (multi-lingual, teaching) - https://hedy.org/

#### **GRAPHICS\***

Curv (mathematical methods for art design)- https://github.com/curv3d/curv

GraRLS (static graphic images) - http://www.grarls.org/

KUIML (skin and GUI) - https://www.bluecataudio.com//Vault/Skins/KUIML/

Complexities of Color in Computing - Ellen Wondra - https://www.youtube.com/watch?v=VCvOwoeOgv8

Dr Huang 's Math Handbook Calculator - http://drhuang.com/ && http://drhuang.com/science/mathematics/software/

Draw2D (diagrams) - http://www.draw2d.org/draw2d/examples.html

Threejs (creation of 3D content) - https://threejs.org/manual/#en/fundamentals

Video (video editing) - <a href="https://lang.video/">https://lang.video/</a>

SciLab (numerical computation) - <a href="https://www.scilab.org/">https://www.scilab.org/</a>

to line 187 move to second document https://ziglang.org/learn/overview/ https://github.com/grain-lang/grain

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https://pat.keldysh.ru/~roman/doc/Turchin/1983 Turchin The Cybernetic Foundation of Mathematics.pdf

Valentin Turchin - <a href="https://pat.keldysh.ru/~roman/doc/Turchin/">https://pat.keldysh.ru/~roman/doc/Turchin/</a>

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Beyond Dispute: The Invention of Team Syntegrity

https://www.amazon.com/Beyond-Dispute-Invention-Team-Syntegrity/dp/0471944513

Viable system model - <a href="https://en.wikipedia.org/wiki/Viable\_system\_model">https://en.wikipedia.org/wiki/Viable\_system\_model</a>

How Many Grapes Went Into the Wine - Stafford Beer (see chapter 'The Irrelevance of Automation')

https://www.amazon.com/Many-Grapes-Went-into-Wine/dp/0471942960

Cybersyn - <a href="http://www.cybersyn.cl/">http://www.cybersyn.cl/</a> && <a href="http://wiki.p2pfoundation.net/Cybersyn">http://www.cybersyn.cl/</a> && <a href="http://wiki.p2pfoundation.net/Cybersyn">http://wiki.p2pfoundation.net/Cybersyn</a>

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Homeostat - http://pespmc1.vub.ac.be/ASC/HOMEOSTAT.html && Variety - https://en.wikipedia.org/wiki/Variety (cybernetics)

Engineering cybernetics: 60 years in the making - Zhiqiang Gao

https://www.researchgate.net/publication/271917376 Engineering cybernetics 60 years in the making

Engineering Cybernetics - Hsue-Shen Tsien [Qian Xuesen] - <a href="https://babel.hathitrust.org/cgi/pt?id=uc1.b3734950&view=1up&seq=7">https://babel.hathitrust.org/cgi/pt?id=uc1.b3734950&view=1up&seq=7</a> Man–Machine–Environment System Engineering Proceedings of the 17th International Conference on MMESE - S. Long and B. Dhillon

 $The \ energy \ evolution - \underline{https://www.amazon.com/Energy-Evolution-Schaubergers-Eco-technology-Schauberger/dp/B00IGYQ24U} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertilisation-Ecotechnology/dp/B01FGORR8M} \\ The \ Fertile \ Earth \ - \underline{https://www.amazon.com/Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth-Agriculture-Fertile-Earth$ 

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Modelica (language for modeling of cyber-physical systems) - <a href="https://modelica.org/modelicalanguage.html">https://modelica.org/modelicalanguage.html</a>

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RBE TVP research center mix - <a href="https://www.youtube.com/watch?v=Jy967Y0OsWY">https://www.youtube.com/watch?v=Jy967Y0OsWY</a>

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Peter Joseph 's podcast <a href="https://www.youtube.com/@RevolutionNowPodcast">https://www.youtube.com/@RevolutionNowPodcast</a>

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Chris Langan Λ Kastrup on Consciousness, Metaphysics, Computation, and God - https://www.youtube.com/watch?v=HsXxgQy4xLQ

La Teoria Sintérgica - Jacobo Grinberg-Zylberbaum

https://www.amazon.com/Teor%C3%ADa-Sintergica-Spanish-Jacobo-Grinberg-Zylberbaum/dp/B08JB1XL3C

Hiroshi Motoyama - Toward a Superconsciousness: Meditational Theory and Practice

 $\underline{https://www.amazon.com/Toward-Superconsciousness-Meditational-Theory-Practice/dp/0895819147}$ 

 $International\ Journal\ of\ Mathematics\ and\ Consciousness\ -\ \underline{http://www.ijmac.com/papers}\ Consciousness\ Is\ All\ There\ Is:\ A\ Mathematical\ Approach\ with\ Applications\ -\ Tony\ Nader\ \underline{http://www.ijmac.com/wp-content/uploads/2015/12/all05.pdf}$ 

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Levels of consciousness - https://en.wikipedia.org/wiki/Altered\_level\_of\_consciousness#Definition

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I Am a Strange Loop - Douglas R. Hofstadter - <a href="https://www.amazon.com/Am-Strange-Loop-Douglas-Hofstadter-ebook/dp/B004PYDBS0">https://www.amazon.com/Am-Strange-Loop-Douglas-Hofstadter-ebook/dp/B004PYDBS0</a>

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Polynomial Root-finding and Polynomiography - Bhaman Kalantari (see section 'Polynomiography based on Voronoi coloring') <a href="https://www.amazon.com/Polynomial-Root-finding-Polynomiography-Bahman-Kalantari/dp/9812700595">https://www.amazon.com/Polynomial-Root-finding-Polynomiography-Bahman-Kalantari/dp/9812700595</a>

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Tetracyclic coordinates - <a href="https://encyclopediaofmath.org/wiki/Tetracyclic\_coordinates">https://encyclopediaofmath.org/wiki/Tetracyclic\_coordinates</a>
A Treatise on the Circle and the Sphere - Julian Coolidge - <a href="https://archive.org/details/treatiseonthecir033247mbp">https://archive.org/details/treatiseonthecir033247mbp</a>
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Three Gears are Possible – Henry Segerman (at Numberphile) - <a href="https://www.youtube.com/watch?v=5Mf0JpTI\_gg">https://www.youtube.com/watch?v=5Mf0JpTI\_gg</a> Segerman 's web - <a href="https://www.shapeways.com/shops/henryseg">https://www.shapeways.com/shops/henryseg</a>

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Also visit https://archive.org/download/usenet-sci/ or https://archive.org/details/usenethistoricalsome

Autoformalization with Large Language Models - <a href="https://arxiv.org/pdf/2205.12615.pdf">https://arxiv.org/pdf/2205.12615.pdf</a>
Yuhuai Wu, Albert Q. Jiang, Wenda Li, Markus N. Rabe, Charles Staats, Mateja Jamnik and Christian Szegedy

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https://www.amazon.co.uk/Le%C5%9Bniewskis-Systems-Foundations-Mathematics-Trends/dp/3319344161

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Quasic blog - L. Edgar Otto - https://pesla.blogspot.com/

From Collective Beings to Quasi-Systems - Gianfranco Minati and Eliano Pessa (quasi-systems) <a href="https://www.amazon.com/Collective-Beings-Quasi-Systems-Gianfranco-Minati/dp/1493975803">https://www.amazon.com/Collective-Beings-Quasi-Systems-Gianfranco-Minati/dp/1493975803</a>

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Visualizing Mathematics The Role of Spatial Reasoning in Mathematical Thought - Kelly S. S. Mix and Michael T. Battista https://www.amazon.com/Visualizing-Mathematics-Reasoning-Mathematical-Education-ebook/dp/B07FKZ8HZG

Mathematical Creativity and Mathematical Giftedness - Florence Mihaela Singer <a href="https://www.amazon.com/Mathematical-Creativity-Giftedness-Capacities-Mathematically/dp/3030103269">https://www.amazon.com/Mathematical-Creativity-Giftedness-Capacities-Mathematically/dp/3030103269</a>

Data Assimilation A Mathematical Introduction - Kody Law, Andrew Stuart and Konstantinos Zygalakis <a href="https://www.amazon.com/Data-Assimilation-Mathematical-Introduction-Mathematics/dp/331920324X">https://www.amazon.com/Data-Assimilation-Mathematical-Introduction-Mathematics/dp/331920324X</a>

Analysing Historical Mathematics Textbooks - Gert Schubring <a href="https://www.amazon.com/Analysing-Historical-Mathematics-Textbooks-International/dp/3031176693">https://www.amazon.com/Analysing-Historical-Mathematics-Textbooks-International/dp/3031176693</a>

How We Understand Mathematics Conceptual Integration in the Language of Mathematical Description - Jacek Woźny <a href="https://www.amazon.com/How-Understand-Mathematics-Integration-Mathematical/dp/3030085139">https://www.amazon.com/How-Understand-Mathematics-Integration-Mathematical/dp/3030085139</a>

Proof Technology in Mathematics Research and Teaching - Gila Hanna, David A. Reid and Michael de Villiers <a href="https://www.amazon.com/Technology-Mathematics-Research-Teaching-Education/dp/3030284824">https://www.amazon.com/Technology-Mathematics-Research-Teaching-Education/dp/3030284824</a>

Adventures of Mind and Mathematics - Wolff-Michael Roth <a href="https://www.amazon.com/Adventures-Mind-Mathematics/dp/3030518116">https://www.amazon.com/Adventures-Mind-Mathematics/dp/3030518116</a>

Doing Research: A New Researcher's Guide - James Hiebert, Jinfa Cai, Stephen Hwang, Anne K Morris and Charles Hohensee <a href="https://www.amazon.com/Doing-Research-Researchers-Mathematics-Education/dp/3031190777">https://www.amazon.com/Doing-Research-Researchers-Mathematics-Education/dp/3031190777</a>

Designing, Conducting, and Publishing Quality Research in Mathematics Education - Keith R. Leatham https://www.amazon.com/Designing-Conducting-Publishing-Mathematics-Education/dp/3030235041

Mathematical Challenges For All - Roza Leikin Editor

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Handbook of Cognitive Mathematics - Marcel Danesi

https://www.amazon.com/Handbook-Cognitive-Mathematics-Marcel-Danesi/dp/3031039467

Encyclopedia of Mathematics Education - Stephen Lerman

 $\underline{https://www.amazon.com/Encyclopedia-Mathematics-Education-Steve-Lerman/dp/3030157881}$ 

Math for the Digital Factory - Luca Ghezzi, Dietmar Hömberg and Chantal Landry <a href="https://www.amazon.com/Digital-European-Consortium-Mathematics-Industry-ebook/dp/B077NGYN2C">https://www.amazon.com/Digital-European-Consortium-Mathematics-Industry-ebook/dp/B077NGYN2C</a>

Early Algebraization A Global Dialogue from Multiple Perspectives - Jinfa Cai and Eric Knuth <a href="https://www.amazon.com/Early-Algebraization-Perspectives-Mathematics-Education/dp/3642177344">https://www.amazon.com/Early-Algebraization-Perspectives-Mathematics-Education/dp/3642177344</a>

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Is Mathematics Inevitable? - Underwood Dudley - https://www.amazon.com/Mathematics-Inevitable-Spectrum-Underwood-Dudley/dp/0883855666

Mathematicians and their gods Interactions between mathematics - Lawrence and McCartney <a href="https://www.amazon.com.au/Mathematicians-their-Gods-Interactions-mathematics/dp/0198703058">https://www.amazon.com.au/Mathematicians-their-Gods-Interactions-mathematics/dp/0198703058</a>

Mathematics and Religion Our Languages of Sign and Symbol - Javier Leach <a href="https://www.amazon.com/Mathematics-Religion-Languages-Templeton-Science/dp/1599471493">https://www.amazon.com/Mathematics-Religion-Languages-Templeton-Science/dp/1599471493</a>

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Beall's list of predatory open access journals - <a href="https://beallslist.weebly.com">https://beallslist.weebly.com</a>
Directory of open access journals <a href="https://doaj.org/">https://doaj.org/</a>

Forgotten Books (List) - <a href="https://www.forgottenbooks.com/en/Mathematics">https://www.forgottenbooks.com/en/Mathematics</a>

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Animetadet knots - Grog - https://www.animatedknots.com/complete-knot-list

Knot Theory and Its Applications - Kunio Murasugi <a href="https://www.amazon.com/Applications-Birkh%C3%83%C2%A4user-Classics-Murasugi-2007-10-03/dp/B01A68JA8S">https://www.amazon.com/Applications-Birkh%C3%83%C2%A4user-Classics-Murasugi-2007-10-03/dp/B01A68JA8S</a>

A Knot-vice's Guide to Untangling Knot Theory - Rebecca Hardenbrook <a href="http://www.math.utah.edu/~rebeccah/A">http://www.math.utah.edu/~rebeccah/A</a> Knot vice s Guide to Untangling Knot Theory.pdf

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Graphs on Surfaces Dualities, Polynomials, and Knots - Joanna A. Ellis-Monaghan and Iain Moffatt <a href="https://www.amazon.com.au/Graphs-Surfaces-Dualities-Polynomials-Knots/dp/1461469708">https://www.amazon.com.au/Graphs-Surfaces-Dualities-Polynomials-Knots/dp/1461469708</a>

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Introduction to Graph and Hypergraph Theory - Vitaly I. Voloshin <a href="https://www.amazon.com/Introduction-Hypergraph-Theory-Vitaly-Voloshin/dp/1606923722">https://www.amazon.com/Introduction-Hypergraph-Theory-Vitaly-Voloshin/dp/1606923722</a>

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Handbook of Graph Drawing and Visualization - Roberto Tamassia

https://www.amazon.com/Handbook-Visualization-Discrete-Mathematics-Applications/dp/113803424X

Handbook of Product Graphs - Richard Hammack, Wilfried Imrich and Sandi Klavzar <a href="https://www.amazon.com/Handbook-Product-Discrete-Mathematics-Applications/dp/1439813043">https://www.amazon.com/Handbook-Product-Discrete-Mathematics-Applications/dp/1439813043</a>

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What is Topological Data Analysis? A Primer

https://wiki.structures.mathi.uni-heidelberg.de/index.php/What is Topological Data Analysis%3F - A Primer

Topological Data Analysis for Scientific Visualization - Julien Tierny

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Fractal dimension and Wada measure revisited: no straightforward relationships in NDDS Pranas Ziaukas and Minvydas Ragulskis - <a href="https://nonlinear.fmf.ktu.lt/Papers/ND">https://nonlinear.fmf.ktu.lt/Papers/ND</a> 2017 v2.pdf Lakes of Wada - <a href="https://en.wikipedia.org/wiki/Lakes">https://en.wikipedia.org/wiki/Lakes</a> of Wada

Magneto-fractaling - Timothy Golden - https://drive.google.com/file/d/1Vvqq2f\_Ch6IozwNimJjcS4kw3tnVmtPd/view

List of fractals by Hausdorff dimension https://en.wikipedia.org/wiki/List of fractals by Hausdorff dimension

Generalization of 3D Mandelbrot and Julia sets - Cheng Jin and Tan Jian-rong <a href="https://www.deepdyve.com/lp/springer-journals/generalization-of-3d-mandelbrot-and-julia-sets-GXA2OHcHRA">https://www.deepdyve.com/lp/springer-journals/generalization-of-3d-mandelbrot-and-julia-sets-GXA2OHcHRA</a>

An Intrinsically Three-Dimensional Fractal -- M. Fernández-Guasti <a href="https://www.researchgate.net/publication/267132753">https://www.researchgate.net/publication/267132753</a> An Intrinsically Three-Dimensional Fractal

 $Zero-dimensional\ Space\ -\ \underline{https://en.wikipedia.org/wiki/Zero-dimensional\ space}$ 

 $Fractal\ Art\ of\ Chris\ Thomasson\ -\ \underline{https://www.youtube.com/channel/UC\ DhsJu-AbQ6Msnxdf8z6Kg/videos\ \underline{https://www.facebook.com/chris.thomasson.31/}$ 

Semichaos Stuff - Casagi - https://groups.google.com/g/sci.math/c/pvnmxpCjDp4 && https://postimg.cc/gallery/JB8TtTj

 $Fractals\ arithm\'{e}tiques\ -\ Jean-Pierre\ Reveilles\ -\ \underline{http://numerisation.univ-irem.fr/ST/IST93018/IST93018.pdf}$ 

The mystery of non-Hausdorff manifolds – Samuel Lereah

https://samuel-lereah.com/articles/Mathematics/the-mystery-of-non-hausdorff-manifolds

Wedgie of two circles - https://en.wikipedia.org/wiki/Wedge\_sum

https://i.stack.imgur.com/kYCs0.png

Dogbone space - <a href="https://en.wikipedia.org/wiki/Dogbone space">https://en.wikipedia.org/wiki/Dogbone space</a>

https://xorshammer.files.wordpress.com/2010/03/sheaf2\_line.png

Reeb foliation - https://en.wikipedia.org/wiki/Reeb\_foliation

Lamination - <a href="https://en.wikipedia.org/wiki/Lamination">https://en.wikipedia.org/wiki/Lamination</a> (topology)

Experiments in Topology - Stephen Barr - https://www.amazon.com/Experiments-Topology-Dover-Books-Mathematics/dp/0486259331

An atlas of the smaller maps in orientable and nonorientable surfaces - David Jackson and Terry I. Visentin <a href="https://www.amazon.com/Orientable-Nonorientable-Surfaces-Mathematics-Applications/dp/1584882077">https://www.amazon.com/Orientable-Nonorientable-Surfaces-Mathematics-Applications/dp/1584882077</a>

A Topological Picturebook - George K. Francis - https://www.amazon.com/Topological-Picturebook-George-K-Francis/dp/0387345426

Society's "Ring of Truth" - John A. Shuster - https://www.researchgate.net/publication/363053086 Society's Ring of Truth

New Foundations for Physical Geometry - Tim Maudlin

https://www.amazon.com/New-Foundations-Physical-Geometry-Structures/dp/0198701306

Three-Dimensional Geometry and Topology, Vol. 1 - William P. Thurston

#### https://www.amazon.com/Three-Dimensional-Geometry-Topology-Vol-1/dp/0691083045

Finlaysonian Geometry - Ross A. Finlayson (scattered in many many posts of sci.math and other usenet groups, also accessible through <a href="https://groups.google.com/g/sci.math">https://groups.google.com/g/sci.math</a>, some examples below)

Continuum Analysis Fundamentals (draft) - https://groups.google.com/g/sci.math/c/Akt1t1NiZlc/m/VkFF9kOdAQAJ

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